

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-2.(Canceled)

3.¹(Currently Amended) A method for operating a code division multiple access communications system, comprising:

~~within a coverage area of a base station,~~ assigning a hopped sub-set of a first set of spreading codes and a first hop sequence to individual ones of a plurality of subscriber stations within a first cell; and

during transmissions within a the first cell, periodically hopping amongst individual ones of the spreading codes of the hopped sub-set of the first set of spreading codes according to the first hop sequence~~such that at any given time no two subscriber stations operate with the same spreading code, wherein the set of spreading codes comprises a hopped sub-set of a larger set of spreading codes,~~ and further comprising assigning a non-hopped sub-set of the ~~larger~~first set of spreading codes to individual ones of said plurality of subscriber stations for use on a system access channel;

assigning a hopped sub-set of a second set of spreading codes and a second hop sequence to individual ones of a plurality of subscriber stations within a second cell adjacent to the first cell; and

during transmissions within the second cell, periodically hopping amongst individual ones of the spreading codes of the hopped sub-set of the second set of spreading codes according to the second hop sequence;

such that at any given time no two subscriber stations of the first or adjacent cell operate with the same spreading code.

4.²(Currently Amended) A method for operating a code division multiple access communications system, comprising:

~~within a coverage area of a base station,~~ assigning a hopped sub-set of a first set of spreading codes and a first hop sequence to individual ones of a plurality of subscriber stations within a first cell; and

during transmissions within a the first cell, periodically hopping amongst individual ones of the spreading codes of the hopped sub-set of the first set of spreading codes according

~~to the first hop sequencesuch that at any given time no two subscriber stations operate with the same spreading code, wherein the set of spreading codes comprises a hopped sub-set of a larger set of spreading codes, and further comprising assigning a non-hopped sub-set of the largerfirst set of spreading codes to individual ones of said plurality of subscriber stations for use on a system control channel;~~

assigning a hopped sub-set of a second set of spreading codes and a second hop sequence to individual ones of a plurality of subscriber stations within a second cell adjacent to the first cell; and

during transmissions within the second cell, periodically hopping amongst individual ones of the spreading codes of the hopped sub-set of the second set of spreading codes according to the second hop sequence;

such that at any given time no two subscriber stations of the first or adjacent cell operate with the same spreading code.

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5. (Currently Amended) A method for operating a code division multiple access communications system, comprising:

~~within a coverage area of a base station, assigning a hopped sub-set of a first set of spreading codes and a first hop sequence to individual ones of a plurality of subscriber stations within a first cell; and~~

during transmissions within a the first cell, periodically hopping amongst individual ones of the spreading codes of the hopped sub-set of the first set of spreading codes according to the first hop sequencesuch that at any given time no two subscriber stations operate with the same spreading code, wherein the set of spreading codes comprises a hopped sub-set of a larger set of spreading codes, and further comprising assigning a non-hopped sub-set of the largerfirst set of spreading codes to individual ones of said plurality of subscriber stations for use on a non-traffic channel;

assigning a hopped sub-set of a second set of spreading codes and a second hop sequence to individual ones of a plurality of subscriber stations within a second cell adjacent to the first cell; and

during transmissions within the second cell, periodically hopping amongst individual ones of the spreading codes of the hopped sub-set of the second set of spreading codes according to the second hop sequence;

such that at any given time no two subscriber stations of the first or adjacent cell

operate with the same spreading code.

5. (Currently Amended) A method for operating a code division multiple access communications system, comprising:

~~within a coverage area of a base station,~~ assigning a hopped sub-set of a first set of spreading codes and a first hop sequence to individual ones of a plurality of subscriber stations within a first cell; and

during transmissions within a the first cell, periodically hopping amongst individual ones of the spreading codes of the hopped sub-set of the first set of spreading codes according to the first hop sequence ~~such that at any given time no two subscriber stations operate with the same spreading code;~~

assigning a hopped sub-set of a second set of spreading codes and a second hop sequence to individual ones of a plurality of subscriber stations within a second cell adjacent to the first cell; and

during transmissions within the second cell, periodically hopping amongst individual ones of the spreading codes of the hopped sub-set of the second set of spreading codes according to the second hop sequence;

such that at any given time no two subscriber stations of the first or adjacent cell operate with the same spreading code,

wherein the step of periodically hopping changes from a currently used spreading code to a next spreading code at a symbol rate or at a multiple of the symbol rate.

7-8. (Canceled)

6
9. (Currently Amended) A method for operating a code division multiple access communications system, comprising:

~~within a coverage area of a base station,~~ assigning a hopped sub-set of a first set of spreading codes and a first hop sequence to individual ones of a plurality of subscriber stations within a first cell; and

during transmissions within a the first cell, periodically hopping amongst individual ones of the spreading codes of the hopped sub-set of the first set of spreading codes according to the first hop sequence ~~such that at any given time no two subscriber stations operate with the same spreading code;~~

assigning a hopped sub-set of a second set of spreading codes and a second hop sequence to individual ones of a plurality of subscriber stations within a second cell adjacent to the first cell; and

during transmissions within the second cell, periodically hopping amongst individual ones of the spreading codes of the hopped sub-set of the second set of spreading codes according to the second hop sequence;

such that at any given time no two subscriber stations of the first or adjacent cell operate with the same spreading code,

wherein the system is a variable data rate system and wherein the step of periodically hopping changes from a currently used spreading code to a next spreading code at the symbol rate; or at a multiple of the symbol rate of one of the lowest symbol rate users.

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10.(Currently Amended) A method for operating a code division multiple access communications system, comprising:

within a coverage area of a base station, assigning a set of spreading codes to individual ones of a plurality of subscriber stations; and

during transmissions within a cell, periodically hopping amongst individual ones of the spreading codes of the set of spreading codes such that at any given time no two subscriber stations operate with the same spreading code, wherein the system is a variable data rate system and wherein the step of periodically hopping changes from a currently used spreading code to a next spreading code at the symbol rate; or at a multiple of the symbol rate of the lowest spreading gain users.

11-12.(Canceled)

8
13.(Currently Amended) A code division multiple access communications system, comprising a controller operating within a coverage area of a base station first cell for assigning a hopped sub-set of a first set of spreading codes to individual ones of a plurality of subscriber stations; and further comprising circuitry that is responsive to transmissions within the first cell for periodically hopping amongst the hopped sub-set of the first set of spreading codes according to a first hop sequence~~such that at any given time no two subscriber stations operate with the same spreading code, wherein the set of spreading codes comprises a hopped sub-set of a larger set of spreading codes,~~ and where said controller further assigns a non-

hopped sub-set of the ~~larger~~first set of spreading codes to individual ones of said plurality of subscriber stations for use on a system access channel;

said controller further coordinating with a base station second cell, adjacent to said first cell, by which a plurality of subscriber stations periodically hop amongst a hopped sub-set of a second set of spreading codes according to a second hop sequence, such that at any given time no two subscriber stations of either the first or second cell operate with the same spreading code.

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14.(Currently Amended) A code division multiple access communications system, comprising a controller operating within a coverage area of a base station first cell for assigning a hopped sub-set of a first set of spreading codes to individual ones of a plurality of subscriber stations; and further comprising circuitry that is responsive to transmissions within at the first cell for periodically hopping amongst the hopped sub-set of the first set of spreading codes according to a first hop sequence~~such that at any given time no two subscriber stations operate with the same spreading code, wherein the set of spreading codes comprises a hopped sub-set of a larger set of spreading codes,~~ and where said controller further assigns a non-hopped sub-set of the ~~larger~~first set of spreading codes to individual ones of said plurality of subscriber stations for use on a system control channel;

said controller further coordinating with a base station second cell, adjacent to said first cell, by which a plurality of subscriber stations periodically hop amongst a hopped sub-set of a second set of spreading codes according to a second hop sequence, such that at any given time no two subscriber stations of either the first or second cell operate with the same spreading code.

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15.(Currently Amended) A code division multiple access communications system, comprising a controller operating within a coverage area of a base station first cell for assigning a hopped sub-set of a first set of spreading codes to individual ones of a plurality of subscriber stations; and further comprising circuitry that is responsive to transmissions within at the first cell for periodically hopping amongst the hopped sub-set of the first set of spreading codes according to a first hop sequence~~such that at any given time no two subscriber stations operate with the same spreading code, wherein the set of spreading codes comprises a hopped sub-set of a larger set of spreading codes,~~ and where said controller further assigns a non-hopped sub-set of the ~~larger~~first set of spreading codes to individual ones of said plurality of

subscriber stations for use on a non-traffic channel;

said controller further coordinating with a base station second cell, adjacent to said first cell, by which a plurality of subscriber stations periodically hop amongst a hopped sub-set of a second set of spreading codes according to a second hop sequence, such that at any given time no two subscriber stations of either the first or second cell operate with the same spreading code.

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16. (Currently Amended) A code division multiple access communications system, comprising a controller operating within a coverage area of a base station first cell for assigning a hopped sub-set of a first set of spreading codes to individual ones of a plurality of subscriber stations; and further comprising circuitry that is responsive to transmissions within ~~at the first cell~~ for periodically hopping amongst the hopped sub-set of the first set of spreading codes according to a first hop sequence ~~such that at any given time no two subscriber stations operate with the same spreading code;~~

said controller further coordinating with a base station second cell, adjacent to said first cell, by which a plurality of subscriber stations periodically hop amongst a hopped sub-set of a second set of spreading codes according to a second hop sequence, such that at any given time no two subscriber stations of either the first or second cell operate with the same spreading code,

wherein said circuitry changes from a currently used spreading code to a next spreading code at a symbol rate or at a multiple of the symbol rate.

17-18. (Canceled)

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19. (Currently Amended) A code division multiple access communications system, comprising a controller operating within a coverage area of a base station first cell for assigning a hopped sub-set of a first set of spreading codes to individual ones of a plurality of subscriber stations; and further comprising circuitry that is responsive to transmissions within ~~at the first cell~~ for periodically hopping amongst the hopped sub-set of the first set of spreading codes according to a first hop sequence ~~such that at any given time no two subscriber stations operate with the same spreading code;~~

said controller further coordinating with a base station second cell, adjacent to said first cell, by which a plurality of subscriber stations periodically hop amongst a hopped sub-

set of a second set of spreading codes according to a second hop sequence, such that at any given time no two subscriber stations of either the first or second cell operate with the same spreading code,

wherein the system is a variable data rate system and wherein the step of periodically hopping changes from a currently used spreading code to a next spreading code at the symbol rate, or at a multiple of the symbol rate of the lowest symbol rate users.

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20.(Currently Amended) A code division multiple access communications system, comprising a controller operating within a coverage area of a base station for assigning a set of spreading codes to individual ones of a plurality of subscriber stations; and further comprising circuitry that is responsive to transmissions within a cell for periodically hopping amongst the set of spreading codes such that at any given time no two subscriber stations operate with the same spreading code, wherein the system is a variable data rate system and wherein the step of periodically hopping changes from a currently used spreading code to a next spreading code at the symbol rate, or at a multiple of the symbol rate of the lowest spreading gain users.

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21.(Currently Amended) A synchronous, direct sequence code division multiple access communications system, comprising a controller operating within a coverage area of a base station first cell for assigning a hopped sub-set of a first set of spreading codes to individual ones of a plurality of subscriber stations within the first cell; and further comprising circuitry that is responsive to transmissions within ~~at the first~~ the first cell for periodically hopping amongst the sub-set of the first set of spreading codes at a symbol rate or a multiple of a symbol rate ~~such that at any given time no two subscriber stations interfere with one another by the use of the same spreading code,~~ wherein ~~the set of spreading codes comprises a hopped sub-set of a larger set of spreading codes, and where~~ said controller further assigns a non-hopped sub-set of the ~~larger first~~ first set of spreading codes to individual ones of said plurality of subscriber stations within the first cell for use on at least one of a system access channel or a system control channel;

said controller further coordinating with a base station second cell, adjacent to said first cell, by which a plurality of subscriber stations within the second cell periodically hop amongst a hopped sub-set of a second set of spreading codes according to a second hop sequence, such that at any given time no two subscriber stations of either the first or second

cell operate with the same spreading code.

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22.(Original) A system as in claim 21, wherein the set of spreading codes comprises an all ones spreading code.

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23.(Original) A system as in claim 21, wherein the system operates as one of a fixed data rate system and a variable data rate system.

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24.(Currently Amended) A system as in claim 21, wherein the hops between spreading codes are made at a symbol boundary of all of the subscriber stations within the first cell.

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25.(Currently Amended) ~~A synchronous code division multiple access communications system, comprising a controller operating within a coverage area of a base station for assigning a set of spreading codes to individual ones of a plurality of subscriber stations, A~~ system as in claim 21, wherein said first set of spreading codes comprising orthogonal, Walsh-Hadamard ~~constructions~~ codes having a variable spreading factor; and further comprising circuitry that is responsive to transmissions within a cell for periodically hopping amongst the set of spreading codes such that at any given time no two subscriber stations operate with the same spreading code, where the hops between spreading codes are made at a symbol boundary of at least one of the plurality of subscriber stations.

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26.(Currently Amended) ~~A method for operating a synchronous code division multiple access communications system, comprising:~~
~~— within a coverage area of a base station, assigning a set of spreading codes to individual ones of a plurality of subscriber stations, A method as in claim 6, wherein the~~ spreading codes comprising orthogonal, Walsh-Hadamard ~~constructions~~ codes having a variable spreading factor; and
~~— during transmissions within a cell, periodically hopping amongst individual ones of the spreading codes of the set of spreading codes such that at any given time no two subscriber stations operate with the same spreading code, where the hops between spreading~~ codes are made at a symbol boundary of at least one of the plurality of subscriber stations.